PARCC EMBEDDED SUPPORTS AND COMPUTER-BASED STUDENT TOOLS
DRAFT V 1.0

October 2012

Purpose:

PARCC assessments and computer-based assessment delivery platforms must be designed to meet the following requirements for embedded support functionalities and tools that will both meet the needs of students requiring accommodations, and ensure accessibility for all students.

Required embedded supports for the 2013 Item Tryouts, 2014 Field Test, and 2014-2015 Operational Assessment have not yet been finalized, so the following list may yet change. However, Contractors should be prepared to enable the following supports.

Embedded Supports for Accessibility /Accommodations and General Student Use include, but are not limited to:

Accessibility/Embedded Support/Accommodation	All Students	Accessibility (APIP/PNP Feature)	Definition or Requirements
1. Text-to-speech and the use of audio files		X	The interface must support text-to-speech software that includes the ability to highlight portions or all text and graphics of the screen to be read aloud.
2. Text to speech for directions only	X		
3. Screen readers		X	
4. Speech-to-text software		X	
5. Font size enlargement/graphic enlargement (magnification).	X	X	Whenever possible, visuals should be represented as vector graphics to allow for high-quality resizing. Using vector graphics, such as structured vector graphics (SVG) rather than portable network graphics (PNG),.JPG, or .GIF graphics, allowing images to be scaled smaller or

			larger without loss of detail.
			When visuals cannot be represented as scalable vector graphics (svg) (e.g., photographs, political cartoons), a resolution should be chosen such that the quality of the visual is not significantly degraded at 400% magnification. This should be confirmed by evaluating the quality of all images at this magnification level. If pixilation or "jaggies" degrade the image, then a higher image resolution should be tried. In most cases, a resolution of twice the normal resolution should be adequate.
			Lossy compression (e.g., JPEG) must not degrade visual quality significantly.
			In cases where providing a higher resolution version of a visual is necessary and significantly increases file size, images may be provided at multiple resolutions, e.g.,
			One image at normal screen resolution and one at a higher resolution suitable for both higher screen resolution and for printing;
			If possible and reasonable, bitmapped text within a visual should be replaced by vectorized text. In all cases, text within visuals must be represented as alt text.
6. Choice of background/text color background or text	X	X	There must be effective color contrast. Shades of gray should not be used together either as graphic features or text.

Item			Notes
7. Highlight critical features	X	X	Colors options must be available to users.
8. Graphic organizers or representations.	X		Venn diagram, T-chart, story map, concept map, flow map, and other to be determined by PARCC.
9. Customized dictionary or other home language supports/tools (keyword translation)		X	
10. Embedded/pop-up glossary	X		Details to be determined by PARCC accessibility and accommodations policies.
11. Reducing visual distractions surrounding written text (Masking)		X	
12. Video signing and Avatars [personalized for sign language]		X	
13. Captions for audio	X	X	PARCC will utilize multimedia to include video, audio, and HTML5 files. The delivery system must render closed captions that are supported by various formats to include but are not limited to the following: • SMIL for .mov and .mpg • SAMI for .avi or .wmv
14. Alternate Response Options	X	X	Alternate Response Options include but are not limited to: adapted keyboards, large keyboards, StickyKeys, MouseKeys, FilterKeys, adapted mouse, touch screen, head wand or other switches. Some alternate response options are external devices that must be plugged-in and be compatible with the Assessment Delivery Platform.
15. Customized timing		X	
16. Braille printing and refreshable Braille devices.		X	
17. Answer Eliminator		X	
18. Line Reader		X	

19. Mark Items for Review	X	X	
20. Text Annotation	X	X	
21. Calculator	X	X	The Assessment Delivery Platform must provide students with on-screen interactive calculator tools (virtual calculators) for (1) four-function calculator with square root capabilities, (2) scientific calculator, and (3) graphic calculator.
22. Ruler (cm/in)	X		
23. Protractor	X		
24. Note Paper / Graph Paper	X		
21. Standard word processing tools/functionalities for constructed response items	X		Functions would include, but not be limited to: undo/redo, cut and paste, text select, options for font style and text color and size, underline, bold, insert bullets, insert images, superscript/subscript, and symbols.